

# RAINWATER HARVESTING

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LIVING SYSTEMS DESIGN  
 Integrated Water Management

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LID IS ABOUT CLOSING THE LOOP

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GREYWATER SYSTEMS

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WHAT DO YOU KNOW ABOUT YOUR WATERSHED?

What is your source of water?  
 In Seattle either the Tolt or Cedar Rivers  
 Average annual rainfall  
 In Seattle area it is 37.06" annually (2002)  
 Three municipal systems:  
 Potable, Sewer & Stormwater  
 How much water do you use per day?  
 Between 80 & 100 gallons  
 Seattle's daily water consumption  
 126 million gallons a day as of February 2005  
 Who owns the rain that lands on your roof?  
 The State of Washington

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WHY HARVEST RAINWATER?

Reduce runoff  
 Reduce water bill  
 Protect streams  
 Restore site hydrology  
 Self sufficiency  
 Separate CSOs

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WATER FACTS

One inch of rain on a thousand square feet = 623 gallons  
 One inch of rain on one acre = 27,151 gallons  
 One cubic foot of water = 7.5 gallons  
 One gallon of water weights = 8.5 pounds

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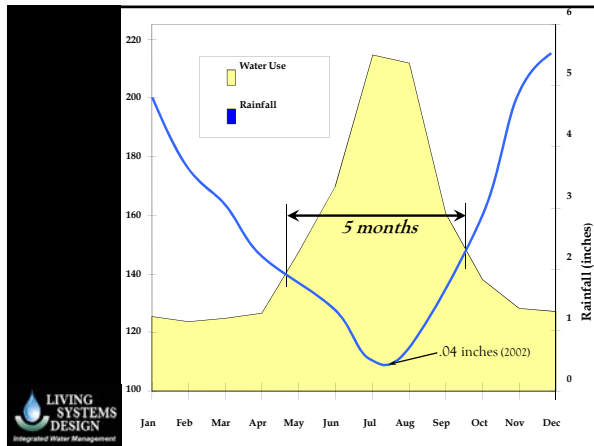
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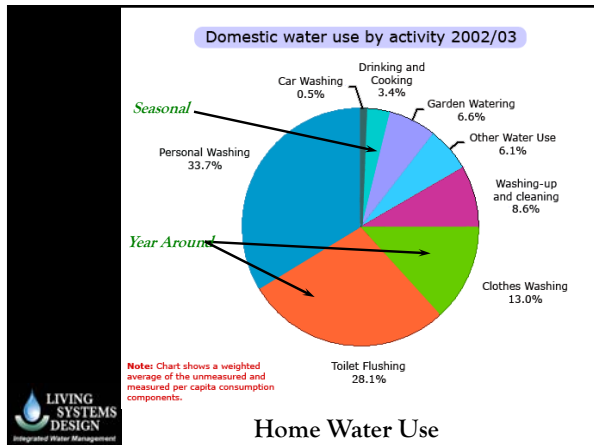
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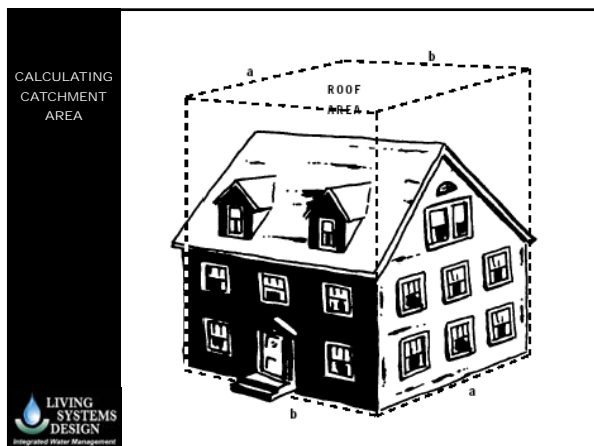
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# WATER & SEWAGE RATES



## 2012 Residential Commodity Charge per CCF (100 cubic feet)

	Inside Seattle	Outside Seattle	Shoreline & Lk. Forest Park*
Off-Peak Usage (Sept. 16 - May 15th)	\$4.04	\$4.61	\$4.90
Peak Usage (May 16th - Sept. 15th)			
Up to 5 CCF per month	\$4.34	\$4.95	\$5.26
Next 13 CCF per month	\$5.15	\$5.87	\$6.25
Over 18 CCF per month	\$11.80	\$13.45	\$14.31

\* These rates apply to the Cities of Shoreline and Lake Forest Park, not the water districts.

## Sewer Rates

For 2011 and 2012, wastewater rates are as follows:

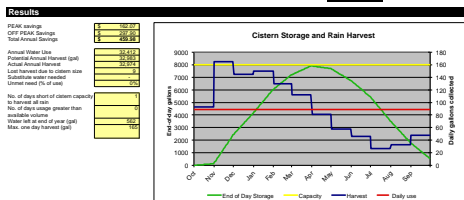
Residential & Commercial	2011	2012
Rate per CCF (100 cubic feet)	\$10.28	\$10.68
Typical Monthly Residential Bill	\$44.20	\$45.92

- 1 CCF equals 748 gallons.
- The typical single family residential customer generates 5.2 CCF of wastewater per month.
- Most residential customers are billed every two months.
- There is a one CCF minimum charge per premise per month.

# WATER BUDGET



System Data		Per Capita Usage (gpd)		Monthly Average (gpd)	
Res. Residents	1	Toilets	0.40	October	3.24
Collection Area (sq ft)	1,000	Washers, Dish	0.40	November	3.24
Cistern Size (gallons)	8,000	Shower, Clothes	0.50	December	5.16
Collection Efficiency (%)	90%	Drainage	0.50	January	5.00
		Faucets	0.10	February	4.00
		<b>Laundry &amp; Other</b>	<b>0.50</b>	March	4.00
				April	2.96
		<b>Consumption (gpd)</b>	<b>2.90</b>	May	2.90
				June	2.90
				July	0.93
				August	1.00
				<b>Average</b>	<b>3.43</b>



# ROOFING MATERIALS








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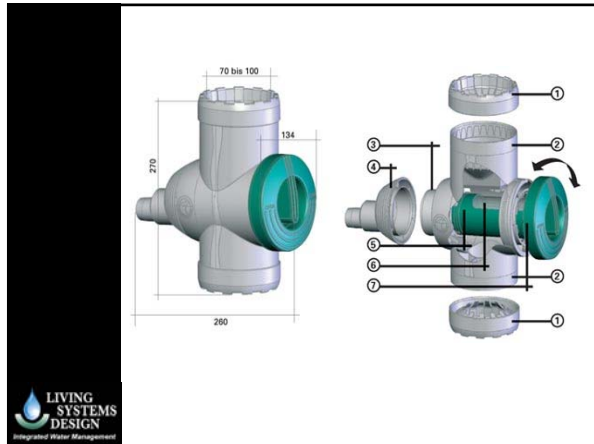
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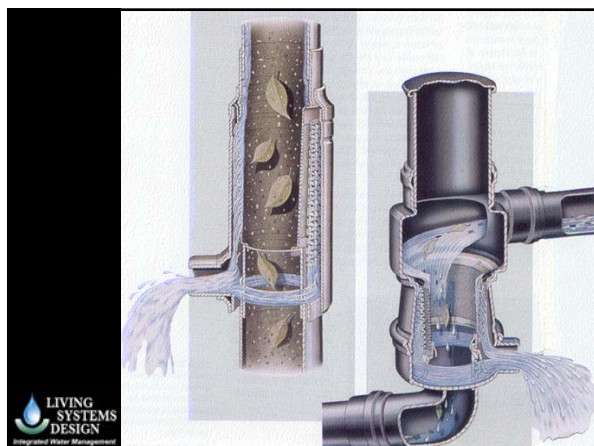
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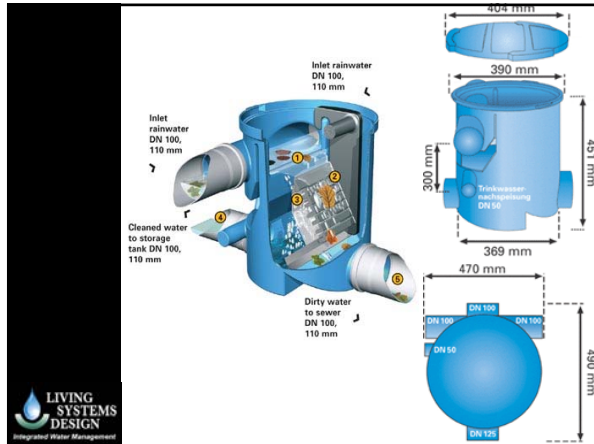
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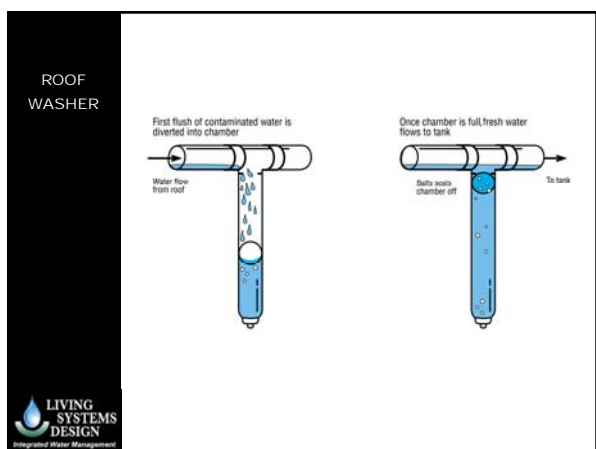
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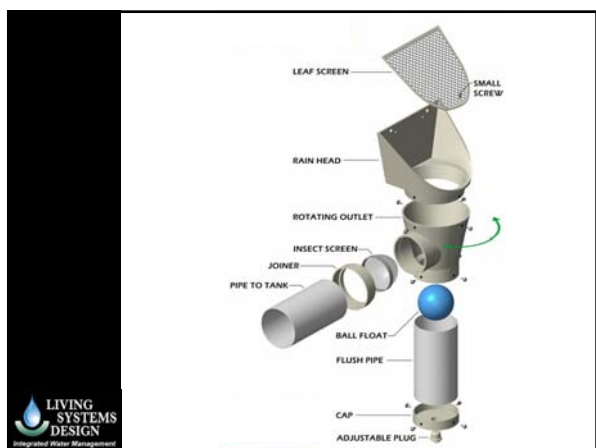
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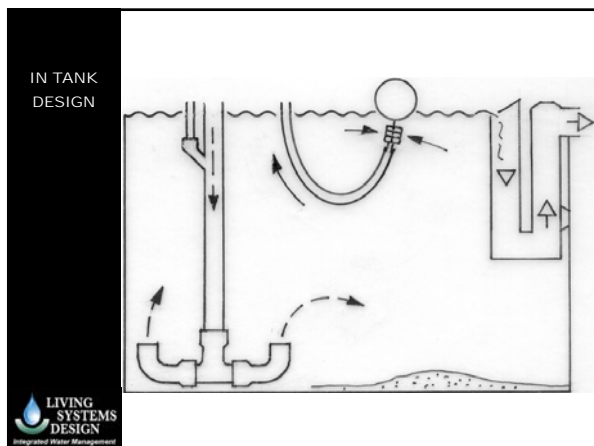
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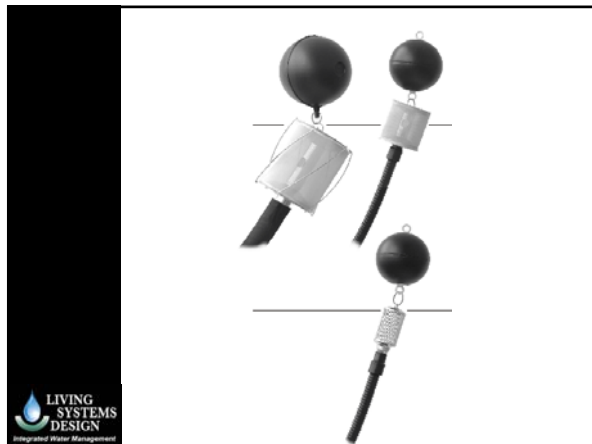
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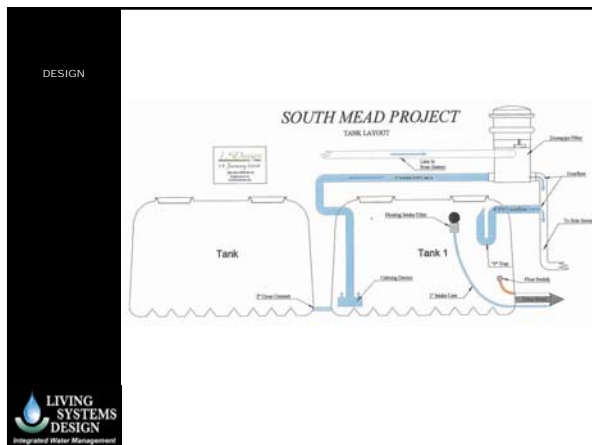
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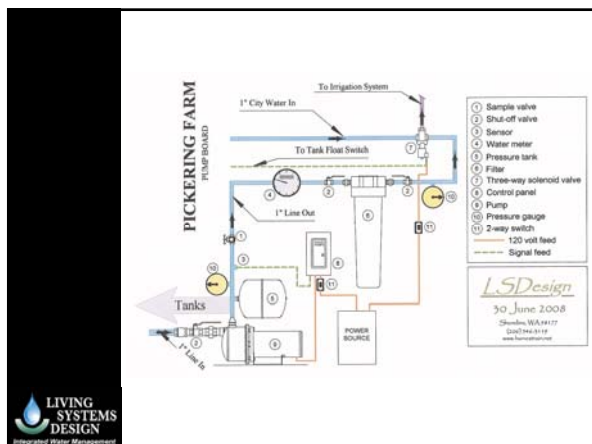
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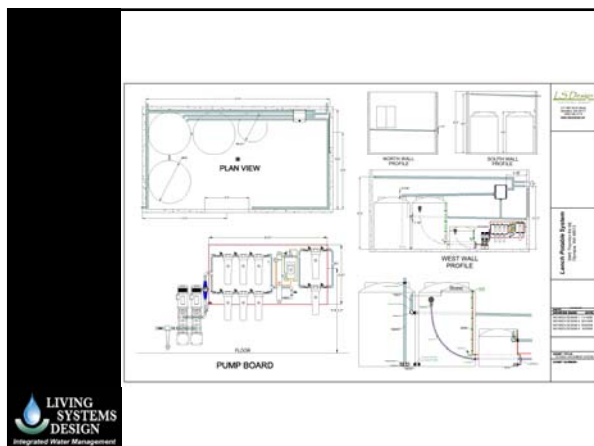
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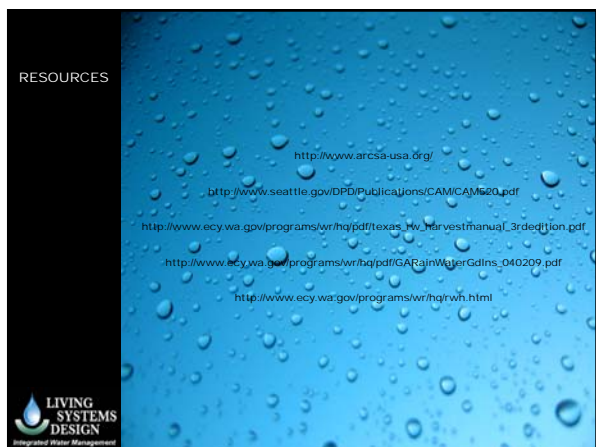
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